Appl. No. : 08/688,622 **Filed** : July 30, 1996

said exhaust end having a partition that divides said exhaust end into a first side and a second side such that a first stream exits said exhaust end on said first side and a second stream of heated air exits said exhaust end on said second side;

a combustion chamber for heating adapted to heat said first stream such that said first stream is expelled from said exhaust end of said engine to produce said supersonic [a first] thrust, and

a heating mechanism adapted to heat said second stream [to a temperature different from that of said first stream] such that said second stream is [also] expelled from said exhaust end of said jet engine to produce a subsonic [second] thrust adjacent to said first thrust and thereby prevent Mach waves from said supersonic [first] thrust.

In addition, please add the following new Claims 32-37:

A jet engine in use propelling an aircraft at a supersonic speed together with the exhaust stream thereof, said engine comprising:

an air intake end and an exhaust end;

a first passage and a second passage extending between said air intake end and said exhaust end;

a combustion chamber in fluid communication with and located along said first passage such that a portion of said first passage is disposed to receive a first flow of exhaust between said combustion chamber and said exhaust end;

24

Appl. No. : 08/688,622 **Filed** : July 30, 1996

said first flow of exhaust forming said supersonic exhaust stream upon exiting said engine;

a heating mechanism in fluid communication with and located along said second passage such that a portion of said second passage is disposed to receive a second flow of exhaust between said heating mechanism and said exhaust end;

said second flow of exhaust forming a subsonic exhaust stream upon exiting said engine; and

said supersonic exhaust stream at least partially enveloped by said subsonic exhaust stream.

33\7) The jet engine of claim 32 wherein said jet engine is a turbofan engine.

burner, said suppression burner being designed to heat the air by burning a fuel.

35. The jet engine of claim 32, wherein said second passage substantially encloses said first passage.

36. The jet engine of claim 32, wherein said jet engine is at least partially surrounded by a shroud, said shroud defining an exterior wall of said second passage.

37. The jet engine of claim 19, wherein said first exhaust stream has a circular or elliptical cross section at a plane, said plane located at said exhaust end of said engine.

15